Problem 1

void setup()

{

pinMode(9, OUTPUT);

}

void loop()

{

int counter;

for (counter = 0; counter < 10; ++counter)

{

digitalWrite(9, HIGH);

delay(1000); // Wait for 1000 millisecond(s)

digitalWrite(9, LOW);

delay(5000); // Wait for 5000 millisecond(s)

digitalWrite(9, HIGH);

delay(2000); // Wait for 2000 millisecond(s)

digitalWrite(9, LOW);

delay(5000); // Wait for 5000 millisecond(s)

digitalWrite(9, HIGH);

delay(3000); // Wait for 3000 millisecond(s)

digitalWrite(9, LOW);

delay(5000); // Wait for 5000 millisecond(s)

}

}

Problem 2

int ledPin = 13;

int buttonPin = 2;

int buttonState = 0;

void setup()

{

pinMode(ledPin, OUTPUT);

pinMode(buttonPin, INPUT);

}

int main()

{

buttonState=digitalRead(buttonPin);

if(buttonState==HIGH)

digitalWrite(ledPin, HIGH);

else if(buttonState==LOW)

digitalWrite(ledPin, LOW);

return (0);

}

Problem 3

const int LED\_PIN = 11;

const int POTENTIOMETER\_PIN = A0;

void setup()

{

pinMode(LED\_PIN, OUTPUT);

}

void loop()

{

int reading = analogRead(POTENTIOMETER\_PIN);

int brightness = map(reading, 0, 1023, 0, 255);

analogWrite(LED\_PIN, brightness);

}

Problem 4

|  |
| --- |
| #include<stdio.h> |
| #include<Servo.h> |
|  |
| int angle=0; |
| int servoPin=9; |
|  |
|  |
| Servo servo1; |
|  |
| void setup() |
| { |
| Serial.begin(9600); |
| servo1.attach(servoPin); |
| } |
|  |
| void loop() |
| { |
| Serial.println("Enter the angle"); |
| printf("Enter the angle"); |
|  |
| angle = Serial.parseInt(); |
| scanf("%d", &angle); |
|  |
| printf("Angle Inputted: %d", angle); |
| for(int i=0;i<=angle;i++) |
| { |
|  |
| servo1.write(angle); |
| delay(3000); |
| } |
| delay(3000); |
| } |

Problem 5

const int echoPin = 2;

const int trigPin = 3;

long duration;

int distance;

void setup() {

pinMode(trigPin, OUTPUT);

pinMode(echoPin, INPUT);

Serial.begin(9600);

}

void loop()

{

digitalWrite(trigPin, LOW);

delayMicroseconds(2);

digitalWrite(trigPin, HIGH);

delayMicroseconds(10);

digitalWrite(trigPin, LOW);

duration = pulseIn(echoPin, HIGH);

distance = duration \* 0.034 / 2;

Serial.print("Distance: ");

Serial.print(distance);

Serial.println(" cm");

}